

Replace the paragraph at page 8, lines 21-23 with the following paragraph:

b2 Pads 116 provide bonding sites to electrically couple chip 110 with external circuitry.

Thus, a particular pad 116 can be input/output pad or a power/ground pad. Pads 116 have a length and width of 70 microns.

Replace the paragraph at page 10, lines 15-28 with the following paragraph:

b3 FIGS. 2D and 2G are enlarged cross-sectional views of various features formed in metal base 120 by wet chemical etching using photoresist layers 142 and 144 as etch masks. In particular, the structure is dipped in a wet chemical etch that provides a back-side etch through the openings in photoresist layer 142 to the exposed portions of surface 122 and a front-side etch through the openings in photoresist layer 144 to the exposed portions of surface 124. The structure is submerged in the wet chemical etch long enough for the etchant to etch about 120 microns into metal base 120. That is, the wet chemical etch provides a "half-etch" that removes slightly over one-half (120/200) the thickness of metal base 120 at the exposed portions. Thus, the back-side etch partially forms slot 128, the front-side etch partially forms slot 128 and completely forms recessed portion 132, and the combination of the front-side and back-side etches completely forms slot 128. Likewise, the front-side and back-side etches are applied simultaneously, and slot 128 and recessed portion 132 are formed simultaneously. The wet chemical etch also forms the other slots 128 and recessed portions 132 as well as recessed portions 134 and the unlabeled openings and notches in a similar manner.

Replace the paragraph at page 17, lines 18-22 with the following paragraph:

b4 A suitable wet chemical etch can be provided by the same solution used to form slots 128 and recessed portions 132 and 134. The optimal etch time for exposing the structure to the wet chemical etch without excessively exposing the portions of leads 138 embedded in peripheral portion 166 and adjacent to inner side surfaces 174 after the selected copper has been removed can be established through trial and error.

Replace the paragraph at page 21, lines 8-17 with the following paragraph:

At this stage, device 186 includes chip 110, conductive traces 150, transparent adhesive 154, connection joints 180 and insulative housing 184. Conductive traces 150 each include a lead 138 that protrudes laterally from and extends through a side surface 162 of insulative housing 184, and a metal trace 144 within insulative housing 184 that contacts an associated lead 138 and connection joint 180. Conductive traces 150 are electrically connected to pads 116 by connection joints 180 in one-to-one relation, and are electrically isolated from one another. Leads 138 are arranged in opposing rows that protrude laterally from and extend through opposing side surfaces 162 and are disposed between top surface 164 and bottom surface 160. Furthermore, light sensitive cell 115 is protected by and receives incident light from the external environment through transparent adhesive 154 and transparent base 182.

Replace the paragraph at page 22, lines 3-6 with the following paragraph:

The light sensitive cell can include a wide variety of light sensitive elements designed to selectively or continuously receive light in a selected frequency range during normal operation of the chip. For instance, the light sensitive cell can be designed to receive visible, ultraviolet or infrared light, combinations thereof, and selected frequencies thereof.

In the Claims

Amend the following claims:

- 1 1. (Amended) An optoelectronic semiconductor package device, comprising:
 - 2 a semiconductor chip that includes an upper surface and a lower surface, wherein the
 - 3 upper surface includes a light sensitive cell and a conductive pad;
 - 4 an insulative housing that includes a first single-piece non-transparent insulative housing
 - 5 portion that contacts the lower surface and is spaced from the light sensitive cell and a second
 - 6 transparent insulative housing portion that contacts the first housing portion and the light
 - 7 sensitive cell, wherein the first housing portion includes a peripheral ledge, and the second
 - 8 housing portion is located within the peripheral ledge and is exposed; and